

Session Parameters

Natural session parameters may be used with certain Natural statements to control such factors as the size of a report, how fields are to be displayed, etc.

This section covers the following topics:

- Session Parameter Usage
 - How to Set Session Parameters
 - Evaluation of Session Parameters
 - Session Parameter Specification/Evaluation Overview
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Session Parameter Usage

In Natural, session parameters are used:

- to specify certain characters,
- to set processing time limits,
- to set a particular response for a given condition,
- to set various size limits,
- to determine various aspects of output reports.

The statements in which a session parameter may be set/evaluated are indicated in the section Session Parameter Specification/Evaluation Overview as well as in the description of each parameter.

At the installation of Natural, the Natural administrator sets these parameters to default values which are then valid for all users of Natural.

To see which parameter values apply to your session, you enter the system command GLOBALS as described in the Natural User's Guide.

How to Set Session Parameters

Natural session parameters can be set in several ways:

- via the default parameter module/file (NATPARM), which is set when Natural is installed;
- via dynamic parameters specified when invoking Natural (as described in your Natural Operations documentation);
- via the system command GLOBALS;
- via a SET GLOBALS statement (in reporting mode only);
- via a FORMAT statement;
- via parameter specification within statements where parameters also are evaluated, for example, INPUT, DISPLAY, WRITE;
- via terminal commands.

Instead of the parameter values "ON" and "OFF", you can also specify "T" (true) or "F" (false) respectively.

Changing Parameters at Session Level Using the GLOBALS Command

For your Natural session you can change some of the parameter values set by the Natural administrator.

Within your Natural session, you can change these parameters by issuing the following system command:

GLOBALS

When you issue the GLOBALS command, a screen is displayed showing the parameter values that are currently in effect for your session. On this screen, you can change the values that do not suit your requirements.

A parameter value set with a GLOBALS command remains in effect until the end of the Natural session (and applies to every object you store during the session), unless you change it again with another GLOBALS command.

Changing Parameters at Program Level Using the FORMAT Statement

You can change certain parameters for the duration of a single program (report). This is done by using a FORMAT statement in the program, which will override the session-wide settings for these parameters.

Example of a FORMAT Statement:

```
FORMAT AL=10 HC=R
```

Parameters set with a FORMAT statement apply until the end of the executed program, unless they are changed with another FORMAT statement in the program.

Not all session parameters can be changed at program level, while several parameters that can be specified at program level cannot be specified at session level; most of the latter are parameters which affect the format of an output report.

Changing Parameters at Statement Level

Most of the parameters you can change with a FORMAT statement you can also change for an individual statement; for example, for a particular DISPLAY, WRITE, INPUT or REINPUT statement.

This is done by specifying the parameter (in parentheses) after the statement name.

Example:

```
DISPLAY (SF=4) NAME JOB-TITLE CURR-CODE SALARY
```

A parameter set at statement level applies only to the statement in which it is specified. The setting at statement level overrides, for that statement only, all other settings of that parameter at other levels.

Changing Parameters at Field Level

Within a DISPLAY, WRITE, INPUT or REINPUT statement, you can also change some parameters for an individual field or output element.

This is done by specifying the parameter (in parentheses) after the field name.

Example:

```
DISPLAY NAME (AL=10) JOB-TITLE CURR-CODE SALARY
```

The parameter value then applies only to that field. The setting at field level overrides, for that field only, all other settings of that parameter at other levels. However, only some of the parameters that can be set at statement level can also be set at field level.

Session Parameter Evaluation

Parameters specified with the statements DISPLAY, FORMAT, PRINT, INPUT, REINPUT, WRITE, WRITE TITLE and WRITE TRAILER are processed during program compilation and are therefore included in the corresponding object module for the program.

The following hierarchy is used for evaluation:

1. Parameters set at element/field (highest priority)
2. Parameters set at statement level
3. Parameters set with a FORMAT statement
4. The default parameter settings (lowest priority)

Parameters set with a SET GLOBALS statement cause the execution time environment to be modified. These modifications remain in effect until overridden by another SET GLOBALS statement (or GLOBALS command).

Session Parameter Specification/Evaluation Overview

X - Parameter may be specified dynamically / with GLOBALS command / with FORMAT statement.

S - Parameter may be specified at Statement level.

E - Parameter may be specified at Element level.

C - Parameter is evaluated at Compilation time.

R - Parameter is evaluated at Runtime.

	Default Value	Dynamic Parameter	GLOBALS Command	Statements						
				SET GLOBALS	FORMAT	DISPLAY	INPUT	REINPUT	WRITE	PRINT
AD - Attribute Definition					X	SE	SE	SE	SE	SE
AL - Alphanumeric Length for Output	none				X	SE	SE		SE	SE
BX - Box Definition	none				X	SE	SE		SE	
CC - Conditional Program Execution	OFF	X	X	R						
CD - Color Definition	NE				X	SE	SE	SE	SE	SE
CF - Character for Terminal Commands	%	X	X	R						
CO - Compiler Output	OFF	X	X							
CV - Control Variable	none					SE	SE		SE	SE
DC - Character for Decimal Point Notation	.	X	X	R						
DF - Date Format	S				X	SE	SE		SE	SE

	Default Value	Dynamic Parameter	GLOBALS Command	Statements						
				SET GLOBALS	FORMAT	DISPLAY	INPUT	REINPUT	WRITE	PRINT
DFOUT - Date Format for Output	S	X	X	R						
DFSTACK - Date Format for Stack	S	X	X	R						
DFTITLE - Date Format in Default Page Title	S	X	X	R						
DU - Dump Generation	OFF	X	X	R						
DY - Dynamic Attributes	none					SE	SE		SE	SE
EJ - Page Eject	ON	X	X	R						
EM - Edit Mask	none				X	SE	SE		SE	SE
ENDIAN - Endian Mode for Compiled Objects	DEFAULT	X	X							
ES - Empty Line Suppression	OFF				X	S			S	
FC - Filler Character	blank				X	SE				
FCDP - Filler Character for Dynamically Protected Fields	ON	X	X	R						
FL - Floating Point Mantissa Length	none				X	SE	SE		SE	SE
FS - Format Specification	OFF	X	X	R						
GC - Filler Character for Group Headers	blank				X	SE				
HC - Header Centering	C				X	SE				
HE - Helproutine	none						SE			

	Default Value	Dynamic Parameter	GLOBALS Command	Statements						
				SET GLOBALS	FORMAT	DISPLAY	INPUT	REINPUT	WRITE	PRINT
HW - Heading Width	ON				X	S				
IA - INPUT Assign Character	=	X	X	R						
IC - Insertion Character	none				X	SE				
ID - INPUT Delimiter Character	,	X	X	R						
IM - INPUT Mode	F	X	X	R						
IP - INPUT Prompting Text	ON				X		SE			
IS - Identical Suppress	OFF				X	SE			SE	
KD - Key Definition	OFF				X					
LC - Leading Characters	none				X	SE				
LE - Limit Error Processing	OFF	X	X	C						
LS - Line Size	physical	X	X	C	X	S	S		S	
LT - Limit of Records Read	99999999	X	X	R						
MC - Multiple-Value Field Count	1				X	S	S		S	S
ML - Msg Line Position	T (mainframe) B (Windows, UNIX, OpenVMS)	X	X							
MP - Maximum Number of Pages	32767				X	S			S	S
MS - Manual Skip	OFF				X		S			

	Default Value	Dynamic Parameter	GLOBALS Command	Statements						
				SET GLOBALS	FORMAT	DISPLAY	INPUT	REINPUT	WRITE	PRINT
MT - Maximum CPU Time	60 sec.	X	X	R						
NC - Use of Natural System Commands	OFF	X	X	R						
NL - Numeric Length for Output	none				X	SE	SE		SE	SE
OPF - Overwriting of Protected Fields by Help routines	ON	X	X	R						
PC - Periodic Group Count	1				X	S	S		S	S
PD - NATPAGE Page Dataset	50	X	X	R						
PM - Print Mode	none	X	X	C	X	SE	SE		SE	SE
PS - Page Size	physical	X	X	CR	X	S	S		S	
REINP - Internal REINPUT for Invalid Data	ON	X	X	R						
SA - Sound Terminal Alarm	OFF	X	X	R						
SF - Spacing Factor	1	X	X	C	X	SE				
SG - Sign Position	ON				X	SE	SE		SE	SE
SL - Source Line Length	72	X	X							
SM - Structured Mode	OFF	X	X							
SYMGEN - Generate Symbol Tables	OFF	X	X							

	Default Value	Dynamic Parameter	GLOBALS Command	Statements						
				SET GLOBALS	FORMAT	DISPLAY	INPUT	REINPUT	WRITE	PRINT
TC - Trailing Characters	none				X	SE				
TS - Translate Output from Programs in System Libraries	OFF	X	X							
UC - Underlining Character	-				X	SE				
WH - Wait for Record in Hold Status	OFF	X	X	R						
ZD - Zero Division Check	ON	X	X	R						
ZP - Zero Printing	ON	X	X	C	X	SE	SE	SE	SE	SE